# COMMONWEALTH OF VIRGINIA Department of Environmental Quality West Central Regional Office STATEMENT OF LEGAL AND FACTUAL BASIS

American of Martinsville, Inc. - Redd Level Plant Route 966, Martinsville, Virginia Permit No. WCRO-30692

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, American of Martinsville, Inc. - Redd Level Plant, has applied for a Title V Operating Permit renewal for its wood furniture manufacturing plant in Martinsville. The Department reviewed the application for permit renewal and has prepared a final Title V Operating Permit.

Engineer/Permit Contact:	Date:		
Air Permit Manager:	Date:		

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#### **FACILITY INFORMATION**

# Permittee

American of Martinsville, Inc. P.O. Box 5071 Martinsville, VA 24115-5071

## **Facility**

American of Martinsville, Inc. - Redd Level Plant Route 966 Martinsville, VA 24115

County-Plant Identification Number: 51-089-0064

Registration No.: 30692

First Renewal of Title V Operating Permit

#### SOURCE DESCRIPTION

NAICS Code: 337122 – Non-upholstered Wood Household Furniture Manufacturing SIC Code 2511 – Wood Household Furniture Manufacturing

American Furniture Company, Inc. is a manufacturer of furniture covered by Standard Industrial Classification (SIC) Code 2511. The facility has the potential to operate twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year. The facility manufactures furniture from rough cut wood that is dried, milled, machined, sawed, sanded, assembled, finished and shipped. The facility is permitted to process 38,540,000 board feet of wood per year from its woodworking operation which supplies all of the wood used in the various departments of the facility.

Portions of the facility are covered by permit while other portions of the facility have never been permitted. The following State NSR permits were incorporated into a single State Operating Permit dated June 27, 2007:

- 1. September 27, 1993 amended **November 10, 1993** 
  - miscellaneous woodworking equipment;
- 2. March 29, 1991 amended August 30, 2001
  - Fritz Press and Columbia opening press;
- 3. September 2, 1999 amended June 14, 2002
  - Combustion Engineering boiler;
- 4. September 30, 2002

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<sup>&</sup>lt;sup>1</sup> American of Martinsville notified DEQ on August 29, 2007 that the Columbia Press is actually an L&L Press

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- Flat Finishing line; and
- 5. February 10, 2000 amended October 19, 2001 amended December 21, 2004
  - Plant 8 (formerly called one Chair Finishing Line) and Sample Plant finishing operations and a Tape Face Veneer spray booth;

Rough cut green hard wood is brought to the facility where it is kiln dried. Steam for the kilns is supplied by the two boilers. Furniture components are made from the dry wood by milling, machining, sawing and sanding. All of the wood dust is collected by the facility's dust collection systems and subsequently to fabric filters. The wood dust fuels the boilers. When not needed, the wood dust is stored in silos and/or a covered shed. All dust systems for the facility are included in the underlying SOP.

The presses are used to make laminated board using veneers and adhesive, which is then used to make furniture components. The presses use low-VOC adhesives and are permitted. Heat for the Fritz press comes from a 1.14x 10<sup>6</sup> Btu/hr natural gas fired heater. Some furniture components have veneer applied using the tape face veneer spray booth to apply adhesive. The tape face veneer spray booth uses a water based adhesive and is permitted.

The furniture components are assembled prior to finishing using various adhesives, such as hot melt and white glue which contain little or no VOCs. The source manufactures some upholstered furniture which utilizes some contact adhesives.

Plant 8 utilizes mostly water-based coatings. This finishing line is permitted and contains 4 spray booths and 4 drying ovens. Heat for the dryers is supplied by steam from the boilers.

Most of the furniture is finished by the main furniture operation which uses solvent based finishes. The main finishing line is in Plant 7 and consists of 12 spray booths and 4 drying ovens. Heat for the ovens is supplied by steam from the boilers. Sample pieces of furniture are finished in the 2 sample plant spray booths.

Process and space heat for the facility are provided by two wood fired boilers, one manufactured by Combustion Engineering (CE) rated at 48.6 x 10<sup>6</sup> Btu/hr and the other manufactured by Keeler rated at 13.6 x 10<sup>6</sup> Btu/hr. The smaller boiler is used during warm weather and the large boiler is used during cold weather. The large boiler is permitted while the small boiler is unpermitted. Fuel for the large boiler is limited to 7,900 tons of wood. The source requested the approval to burn coal be removed from the Title V permit issued December 28, 2001 and the NSR permit issued September 2, 1999. American Furniture signed a mutual shutdown agreement on June 12, 2002 for the coal-burning capacity for the boilers, effectively restricting the boilers to burning wood fuel only.

The wood furniture MACT (Subpart JJ) applies to the furniture finishing portion of this facility since actual HAP emissions exceed the 10/25 tons per year threshold. There are no emission limits for HAPs from the facility.

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The boiler MACT (Subpart DDDD) has been vacated. Currently awaiting guidance on how to proceed with implementation of case-by-case MACT (112j).

The Plywood and Composite Wood Products (PCWP) MACT (Subpart DDDD) is applicable to the following operations:

S04B	Sample Plant Edge Fill Spray Booth
V07A	Fritz Hot Veneer Press
V07B	L&L Veneer Press (formerly listed as Columbia Press)
	Sennerskov Hot Press <sup>2</sup>
TV03A	Tape Face Veneer Glue Spray Booth
TV03B	Tape Face Hot Press (Tape Face Veneer)
K14	Wood Drying Kilns (listed as an insignificant emission unit under §XIII)

MACT requirements for this equipment are for initial notification only; there are no associated emission limits or work practice standards. Therefore, this MACT is not included as an attachment to the permit. State Toxics limits for the L&L and Fritz presses have been dropped from the T5 Permit (State Only Section) since processes covered by a MACT standard are not subject to State Toxics.

The original Title V operating permit was signed on December 28, 2001, with an effective date of February 1, 2002. There have been 2 subsequent amendments to that original permit, the first on June 18, 2002 and more recently, April 21, 2005. Neither of these permits affects the Title V expiration date of January 31, 2007. The applicant submitted a timely and complete Title V permit application for a renewal, which extends, if needed, the terms of the Title V permit until renewal.

# **COMPLIANCE STATUS**

The facility was last inspected on January 11, 2007. It was found to be in compliance.

<sup>&</sup>lt;sup>2</sup> American of Martinsville notified DEQ on August 29, 2007 that a new glue press was being installed -- no permit to construct and operate is required under Article 6 so the press is being added to the Title 5 permit.

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# EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

Emission units at this facility are as follows:

Emission Unit ID	Emission Unit Description	Capacity/ Size	Pollution Control Device	Applicable Permit Date and/or Federal Regulation		
Fuel Burning Equipment Subject to 9 VAC 5 Chapter 40 (Existing)						
B02	Keeler wood-fired boiler	13.6 x 10 <sup>6</sup> Btu/hr	1 Multicyclone			
	installed 1962					
Fuel Burni	ng Equipment Subject to 9 VAC 5 Chapter 50 (New or Modified)	)				
B01	Combustion Engineering Model CE-VU10 wood-fired boiler -	48.6 x 10 <sup>6</sup> Btu/hr	2 Multicyclones in	SOP 06/27/07		
	installed 10/1987		series	CAM		
Woodwork	sing Equipment Subject to 9 VAC 5 Chapter 50 (New or Modified	(h				
W06	Misc. woodworking equipment		Enclosed transfer	SOP 06/27/07		
	angular panel saw	38,540,000	Fabric filters	CAM		
	combination banding machines	board feet/yr	2 Carter Day			
	feedthrough boring machines	(permit limit)	6 Pneumafil			
	wood hog		1 MAC			
Furniture 1	Finishing Equipment Subject to 9 VAC 5 Chapter 40 (Existing)	•				
FG09	<u>Plant 7 Finishing Room</u>	Varies	Spray booth filters	MACT JJ		
	12 spray booths					
	4 drying ovens					
	1 wash off tank					
	misc. gluing operations					
	2 offline repair spray booths					
	1 edge fill spray booth					
S04B	Sample Plant Edge Fill Spraybooth	Varies	none	MACT DDDD*		

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Emission Unit ID	Emission Unit Description	Capacity/ Size	Pollution Control Device	Applicable Permit Date and/or Federal Regulation			
Furniture Finishing Equipment Subject to 9 VAC 5 Chapter 50 (New or Modified)							
FL01	Flat Finishing Line	39.0 t/yr VOC	none	SOP 06/27/07			
	3 roll coaters	(permit limit)		MACT JJ			
	1 steam-heated oven with flash tunnel						
C05	Plant 8 Finishing Line	80 lb/hr and	spray booth filters	SOP 06/27/07			
	4 Spray Booths	55.7 t/yr VOC	(5% opacity limit on	MACT JJ			
	4 Drying Ovens	(permit limit)	spray booths)				
S04A	Sample Plant Spray finishing	11.5 lb/hr and	spray booth filters	SOP 06/27/07			
	2 Finishing Spray Booths	14.3 t/yr VOC	(5% opacity limit)	MACT JJ			
		(permit limit)					
Furniture Gluing Equipment Subject to 9 VAC 5 Chapter 50 (New or Modified)							
V07A	Fritz Hot Veneer Press	231 lbs glue/hr	none	SOP 06/27/07			
				MACT DDDD*			
V07B	L&L Veneer Press (formerly listed as Columbia Press)	43 lbs glue/hr	none	SOP 06/27/07			
				MACT DDDD*			
	Sennerskov Hot Press (installed August 2007)		none	MACT DDDD*			
TV03A	Tape Face Veneer Glue Spray booth	Varies	spray booth filters	SOP 06/27/07			
				MACT DDDD*			
TV03B	Tape Face Hot Press (Tape Face Veneer)	Varies	none	MACT DDDD*			

<sup>\*</sup>MACT DDDD requirements are for initial notification only.

#### **EMISSIONS INVENTORY – Actual Emissions**

Actual plant emissions for calendar year 2006 as listed in the DEQ CEDS annual emission inventory system are summarized as follows:

2006 Actual Pollutant Emissions in Tons per Year						
	СО	VOC	$SO_2$	$PM_{10}$	NOx	HAPs (HCl)
TOTAL	69.99	462.77	0.39	16.28	7.72	1.57

#### NSPS, MACT, and CAM APPLICABILITY

NSPS - There are no applicable NSPS for this facility.

#### **MACT**

The Wood Furniture Manufacturing MACT JJ applies to the finishing operations at the facility. The facility uses the compliant coating option to meet the applicable MACT JJ requirements and tracks coating consumption via REGMET.

The <u>Boiler MACT (Subpart DDDDD)</u> has been vacated. Currently awaiting guidance on how to proceed with implementation of case-by-case MACT (112j).

The <u>Plywood and Composite Wood Products (PCWP) MACT (Subpart DDDD)</u><sup>3</sup> is applicable to the following operations:

S04B	Sample Plant Edge Fill Spray Booth
V07A	Fritz Hot Veneer Press
V07B	L&L Veneer Press (formerly listed as Columbia Press)
	Sennerskov Hot Press
TV03A	Tape Face Veneer Glue Spray Booth
TV03B	Tape Face Hot Press (Tape Face Veneer)
K14	Wood Drying Kilns (listed as an insignificant emission unit under §XIII)

MACT requirements for this equipment are for initial notification only; there are no associated emission limits or work practice standards. Therefore, MACT DDDD is not included as an attachment to the permit.

<u>CAM</u> (Compliance Assurance Monitoring) -The facility has determined that CAM is applicable

<sup>&</sup>lt;sup>3</sup> MACT DDDD was partially vacated on June 19, 2007 however this action did not impact any of the sections applicable to this facility. Applicability to the glue presses is taken from a letter dated July 13, 2005 from EPA to Bill Perdue in response to questions raised by the American Home Furnishings Alliance.

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to the following equipment:

- Combustion Engineering boiler (B01) which has 2 multicyclones in series for PM control, and
- Woodworking Equipment (W06) which is controlled by 9 fabric filter baghouses.

#### **CHANGES TO PLANT**

Although the underlying permits for some equipment have been amended, the changes were for emissions and not equipment. A name change was instituted to reflect that the plant is no longer owned by La-Z-Boy.

#### **CHANGES TO PERMIT**

- The Title 5 permit for this facility was originally issued on December 28, 2001. The permit was amended on June 18, 2002 and again on April 21, 2005 to incorporate three state NSR permits. There have been no changes to the facility since the April 2005 amendment, however all 5 underlying NSR permits were incorporated into one State Operating Permit dated June 27, 2007 which will be reflected in the underlying permit references throughout the permit. The 2007 SOP also updated the allowable emissions from the Combustion Engineering boiler (B01); these emissions are reflected in this Title 5 renewal.
- The "State Only" section incorporating State Toxics has been deleted since the press is now covered by the PCWP MACT (DDDD) for initial notification only.
- The Columbia Veneer Press is actually an L&L Veneer Press and a new Sennerskov Hot Press has been added (§ X)
- A CAM plan (Appendix A) has been added to the permit for the Combustion Engineering Boiler (B01) and the Woodworking Equipment (W06).

#### REPORTING

The permittee shall submit the following reports:

- annual Title V Compliance Certifications to DEQ and EPA (Region III) by March 1 for the previous calendar year;
- semi-annual Title V Reports to DEQ by March 1 and September 1 of each year (time periods to be addressed are January 1 to June 30 and July 1 to December 31);
- semi-annual Wood Furniture Manufacturing MACT (40 CFR 63 Subpart JJ) Reports to DEQ and EPA (Region III) by March 1 and September 1 of each year (time periods to be addressed are January 1 to June 30 and July 1 to December 31); and

 reports to DEQ within 4 daytime business hours after discovery any malfunctions and any deviations from permit requirements that may cause excess emissions for more than one hour.

#### **GENERAL CONDITIONS**

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all facilities operating under a Federal operating permit. Selected requirements are noted below:

## **B.** Permit Expiration

This condition refers to the five year permit term, to the permittee's responsibility to apply for renewal, to the State Air Pollution Control Board taking action on a permit application, and to the prior terms and conditions remaining in effect until the renewal is issued or denied. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement No. 3-2001".

#### J. Permit Modification

This condition cites the following sections from the Virginia Regulations for the Control and Abatement of Air Pollution:

- 9 VAC 5-80-50 Applicability, Federal Operating Permit For Stationary Sources
- 9 VAC 5-80-190 Changes to Permits.
- 9 VAC 5-80-260 Enforcement.
- 9 VAC 5-80-1100 Applicability, Permits For New and Modified Stationary Sources
- 9 VAC 5-80-1605 Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas

#### U. Malfunction as an Affirmative Defense

The Virginia Regulations for the Control and Abatement of Air Pollution contain two reporting requirements for malfunctions that coincide. Reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. Malfunction requirements are listed in General Conditions U and F.

This condition cites the following sections:

- 9 VAC 5-20-180 Facility and Control Equipment Maintenance or Malfunction
- 9 VAC 5-80-110 Permit Content

#### Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

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This general condition contains citations from the Code of Federal Regulations as follows:

- 40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
- 40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.
- 40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

# STATE ONLY APPLICABLE REQUIREMENTS

This permit contains no State Only Applicable Requirements

# FUTURE AND/OR NEWLY APPLICABLE REQUIREMENTS

The following future and/or newly applicable requirements have been identified for this facility.

- Boiler MACT (DDDDD) has been vacated.
- CAM applicable to B01 and W06.
- Plywood and Composite Wood Products MACT (DDDD) applies to certain operations, (dry kilns, gluing operations, presses - see previous discussion) -- requirements are for initial notification only.

#### INAPPLICABLE REQUIREMENTS

The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A 3 (for pre-1972 existing emission units) cannot be included in any Title V permit because this portion of the regulation is not part of the federally approved state implementation plan (SIP). The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions." Since this is a new plant as of 1998, the existing source opacity exclusion is not applicable for any equipment at this facility.

In contrast, the similar startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-

50-20 A 4, for emissions units that are new or modified since 1972, is SIP-approved and therefore applies to all emissions units at this facility.

#### **COMPLIANCE PLAN**

This facility is not subject to a compliance plan.

## **INSIGNIFICANT EMISSION UNITS**

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110. Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutants Emitted	Rated Capacity
K14	Wood Drying Kilns	9 VAC 5-80-720.A.	VOC, PM	10.5 MM bd-ft/yr
AGT12	above ground fuel storage tanks	9 VAC 5-80-720.A.	VOC	250 gal. (gasoline) 250 gal. (diesel) 500 gal. (diesel)
B11	natural gas-fired oil heater for Fritz press	9 VAC 5-80-720.A.		1.14 MMBtu/hr
DE13	diesel engine fire pump	9 VAC 5-80-720.A.		260 HP
WD015	(5) purchased wood silos	9 VAC 5-80-720.B.	PM-10	(3) 90 tons (1) 40 tons (1) 50 tons
TS016	tool shop metal dust baghouse	9 VAC 5-80-720.A.	PM-10	2,000 cfm

#### **CONFIDENTIAL INFORMATION**

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

#### PUBLIC PARTICIPATION

The draft/proposed permit was advertised for public notice in the *Martinsville Bulletin* on September 21, 2007. The required 30-day public notice period closed on October 22, 2007 with no comments received.

The EPA 45 day concurrent review period was September 21, 2007 through November 5, 2007. No comments were received from EPA.

This permit was advertised for *concurrent review*.